Center Innovation Fund: GSFC CIF

ISS Leak Detection and Astrophysics with Lobster-Eye X-Ray Detector Project

Completed Technology Project (2010 - 2013)

Project Introduction

The Lobster-Eye X-Ray Transient Detector leverages cutting-edge science detectors to improve human spaceflight on ISS and Astrophysics applications. The unique features of the Lobster X-Ray detector are the large Field of View (FOV), high sensitivity and high localization focused X-Rays. The impact of the technology will enable both ISS world-class science and astronaut safety.

Demonstrate angular resolution and sensitivity. Successful lab demonstration of ISS leak checking, using nitrogen, electron beam, and Lobster x-ray optic.

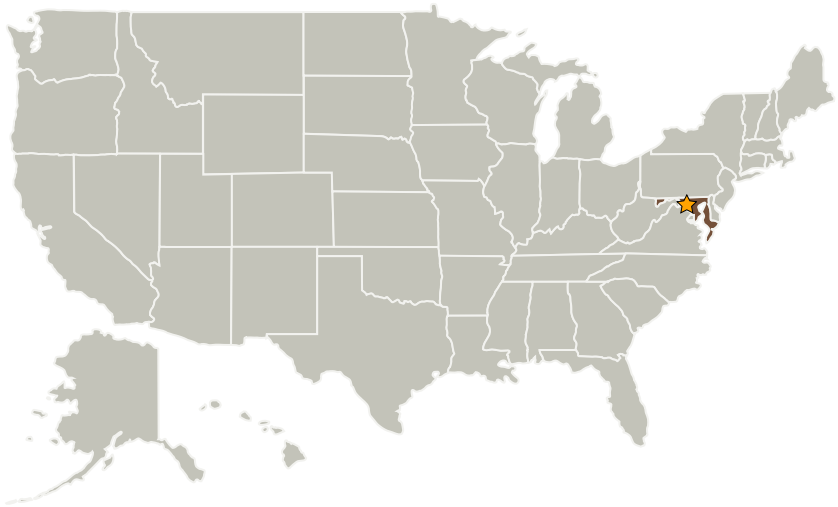
Anticipated Benefits

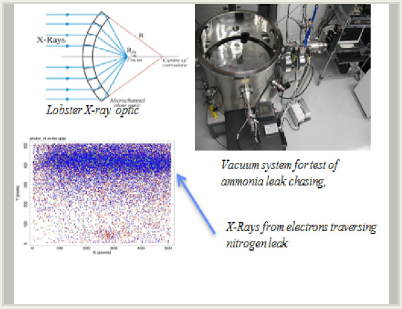
Direct detection of Black Hole X-Rays, gravitational wave coincidence studies are performed by using the Lobster detector in astrophysics mode.

Lobster X-Ray Imaging technology gives high sensitivity and source localization.

Ability to support Human Spaceflight

Primary U.S. Work Locations and Key Partners





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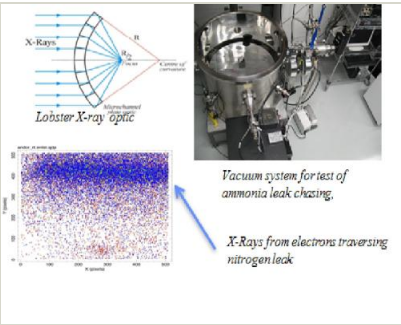
Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations
Maryland

Images



ISS Leak Detection and Astrophysics with Lobster-Eye X-Ray Detector Project
ISS Leak Detection and Astrophysics with Lobster-Eye X-Ray Detector Project *(https://techport.nasa.gov/image/3006)*

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Center / Facility:
Goddard Space Flight Center (GSFC)

Responsible Program:
Center Innovation Fund: GSFC CIF

Project Management

Program Director:
Michael R Lapointe

Program Manager:
Peter M Hughes

Project Manager:
Michael J Amato

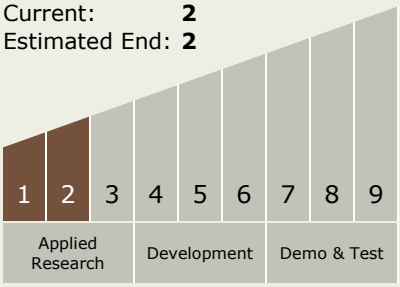
Principal Investigator:
Shahid Aslam

ISS Leak Detection and Astrophysics with Lobster-Eye X-Ray Detector Project

Completed Technology Project (2010 - 2013)

Technology Maturity (TRL)

Start: **1**
Current: **2**
Estimated End: **2**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.1 Detectors and Focal Planes